

Optimal chemo-mobilization regimen for peripheral blood stem cell collection in multiple myeloma

화순전남대학교병원 혈액종양내과

*송가영, 정성훈, 안서연, 이승신, 안제숙, 양덕환, 김여경, 김형준, 이제중

For successful autologous stem cell transplantation, collection of the sufficient number of hematopoietic stem cells is essential after induction therapy for transplant candidates in multiple myeloma (MM). In this study, we compared the efficacy and safety of stem cell mobilization with etoposide (VP-16; 375 mg/m² on days 1 and 2) or cyclophosphamide (CY; 3.0 g/m² on day 1) in patients with MM. Granulocyte-colony stimulating factor (G-CSF, 10 ?g/kg/day, subcutaneously) was administered from the development of neutropenia to the final collecting day. Mobilization failure was defined as total collected CD34+ cell count <4.0 ? 10⁶ cells/kg in three apheresis procedures. Seventy-six patients were mobilized with CY and G-CSF, and 46 patients were mobilized with VP-16 and G-CSF between February 2008 and July 2017. Median total collected number of CD34+ cells was significantly higher in patients who were mobilized with VP-16 compared with those who were mobilized with CY (27.6 ? 10⁶ cells/kg vs. 9.5 ? 10⁶ cells/kg, $p < 0.001$). In addition, the rate of mobilization failure was significantly lower in VP-16 group compared with CY group (2.2% vs. 23.7%, HR 0.072, 95% CI 0.009-0.557, $p = 0.001$). One patients who were mobilized with VP-16 showed mobilization failure and did not achieve the sufficient collection of stem cells in subsequent mobilization process with plerixafor. Severe infections during mobilization period were frequently developed in CY group (15.8% in CY group vs. 8.6% in VP-16 group, $p = 0.407$). The median time to platelet engraftment ($> 20 \times 10^9/L$) and neutrophil recovery ($> 0.5 \times 10^9/L$) did not different between two group after autologous transplantation. In conclusion, VP-16 and G-CSF was a very effective and safe method for peripheral blood stem cell mobilization and is considered as a more suitable chemo-mobilization regimen compared to CY and G-CSF in patients with MM.

Multiple lymph node plasmacytomas in a patient with plasma cell myeloma

¹고려대학교 의과대학 안산병원 혈액종양내과, ²고려대학교 의과대학 안산병원 진단검사의학과, ³고려대학교 의과대학 안산병원 병리과

*최호준¹, 이병현¹, 김정선¹, 이세련¹, 장은아², 최정우³, 성화정¹

The incidence of plasmacytoma (PC) is 7% to 18% in newly diagnosed multiple myeloma (MM) and up to 20% in relapsed MM. The majority of PCs in patients with MM are localized in soft tissues surrounding the skeleton, and PCs found in multiple lymph nodes (LNs) are rare. A 50-year-old female presented for dyspnea on exertion. On chest computed tomography, multiple LN enlargements were noted in both axillae, cervical and mediastinal areas. Complete blood count showed Hb of 10.7 g/dL, ANC of 1277/μL, and platelets of 73,000/μL. Inversed albumin to globulin ratio was noted with protein of 11.1 g/dL, and albumin of 2.9 g/dL. Protein electrophoresis showed M-peak in both serum and urine. M-protein was 3.5 g/dL in serum, 22 mg/dL in urine. By immunofixation electrophoresis, IgA lambda type monoclonal gammopathy was confirmed. X-ray, bone scan, and whole spine MRI showed no osteolytic lesion. Bone marrow aspiration and biopsy were done, which showed the proportion of plasma cell counts up to 11.4%. Positron emission tomography showed hypermetabolism in multiple LNs of both neck, axillae, aortocaval, iliac, and inguinal areas. MM with multiple LN plasmacytomas is extremely rare, so excisional biopsy was done in right axillary LN to rule out other metastatic or lymphoid malignancies. It showed a plasma-cell infiltrate strongly positive for CD138, consistent with PC. Thus the patient was diagnosed with plasma cell myeloma with multiple LN plasmacytomas. The patient is under systemic chemotherapy.

